INVASIVE SPECIES CONTROL PROJECTS (R1 SMALL GRANTS)
FY 2014 FINAL REPORT

Project Title: Umatilla Rough Fish Removal
Station: Umatilla NWR
Contact Person: Laci Bristow

Project Description: In order to enhance environmental conditions in the McCormack Slough on Umatilla NWR, the population of rough fish, including common carp (*Cyprinus carpio*) and bullheads (*Ameriurus* spp.), was treated with rotenone. The long term goal of this project was to provide better habitat conditions within McCormack slough for wintering waterfowl populations. Removal of carp generally results in improved water clarity, increased growth of submerged aquatic vegetation (SAV), and larger populations of aquatic invertebrates and small vertebrates, all of which can be beneficial to waterfowl and other wildlife. The project was organized by Umatilla NWR staff and carried out with help from the entire Mid-Columbia River NWR Complex staff.

Invasive Species Targeted: common carp and bullheads

Project Completion Date or Estimated Completion Date: Project Completed 9/30-10/2, 2014

Project Results It is too early to be able to quantify results as we are still conducting post-treatment monitoring. We completed pre-treatment monitoring, including zooplankton/BMI/AMI sampling by a contractor (EcoAnalysts). They have 90 days after receipt of samples to process them and produce a report. The only pre-treatment monitoring that is reportable is bathymetric data (see attached maps). We have not analyzed other data collected because we don't have data to compare it to yet. We can report that there was a significant fish kill observed in all treated areas. Thousands of dead carp washed up on the shores of the McCormack slough. During and after the treatment, it was apparent that the carp population was heavily impacted. A few small fish have been observed within the ponds but have not yet been sampled to determine species. No carp have been observed within the slough post-treatment, but monitoring is still in progress. Water metrics and SAV will be sampled next summer (2015). Waterfowl surveys are being conducted through the winter and will be conducted next winter as well, at which time we expect to see the full positive effects of the treatment. Final reports will be completed in spring, 2016.

Number of Acres Treated: 149 surface acres of open water, 346 acre feet in volume

Number of Acres Inventoried and/or Mapped: There are 149 acres of open water (surface measurement); however the bathymetric data determined that there were 346 acre feet of treatable water in the wetlands

Number of Acres Restored: 346 acre feet of treatment area within 149 surface acres of wetlands

Total Grant Amount: 33,000.00

Breakdown of Expenditures:

Category	**Total $ Spent**	**% of Total Grant**
Equipment/Supplies		
Chemical	26,000.00	79
Biocontrol Agents		
Travel		
Biotech/Contractor Salary	7,000.00	21

Restoration Materials		
Other (Describe)		
TOTAL	33,000.00	100